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CASE REPORT

ERUPTION CYST: A CASE REPORT

Hameed Shaul*, Laxmikanth Chatra, Prashanth Shenai, Prasanna Kumar Rao, KM Veena, Rachana V Prabhu, Prathima Shetty

Department of Oral Medicine & Radiology, Yenepoya Dental College, Yenepoya University, Mangalore, Karnataka, India

***Corresponding Author**: Dr. Shaul Hameed

Email: - shahulomr@gmail.com.

Running Title: Eruption Cyst

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ABSTRACT:

Eruption cyst (EC) is a benign cyst associated with a primary or permanent tooth in its soft tissue phase after erupting through the bone. It is most prevalent in the Caucasian race. It is clinically significant in that knowledge among general dentists is very essential regarding this developmental disturbance to reach the correct diagnosis and to provide proper treatment. We are reporting a case of eruption cyst in an 11 year old boy.

Keywords: Benign cyst, eruption cyst, eruption hematoma, simple excision
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INTRODUCTION:

The eruption cyst is a form of soft tissue benign cyst accompanying an erupting primary or permanent teeth and appears shortly before appearance of these teeth in the oral cavity [1]. Eruption cyst is the soft tissue analogue of the dentigerous cyst, but recognized as a separate clinical entity [1]. Literature shows small number of reported cases of eruption cysts and they appear to be more prevalent in the Caucasian race [2]. The cyst results from a

separation of the dental follicle from the crown of an erupting tooth and fluid accumulation occurs within this created follicular space [3,4]. A case report of eruption cyst in the maxillary arch in an 11 year old boy is presented.

CASE REPORT:

An 11 years old boy reported to the dental outpatient department with a complaint of swelling on the upper right back teeth region since 2 days. Clinical examination revealed a 1 x1 cm dome shaped raised swelling in the region of maxillary left first premolar, which was bluish-brown in color, asymptomatic, except the appearance (Figure 1). Intra oral periapical radiograph showed a pericoronal shadow of soft tissue covering the erupting tooth (Figure 2). Based on the history and clinical findings a diagnosis of eruption cyst was made. Surgical exposure was carried out to expose the erupting tooth (figure 3).

The specimen send for histopathological examination which showed surface oral epithelium on the superior aspect, underlying lamina propria showed variable inflammatory cell infiltrate the deep portion of the specimen which represents the roof of the cyst showed thin layer of non keratinizing squamous epithelium. Thus diagnosis of eruption cyst was confirmed.

DISCUSSION:

The prevalence of eruption cysts (EC) may be low due to the fact that many authors classify them among the dentigerous cysts. In addition, since they are benign, there are a few studies in which the authors have done a definitive diagnosis using biopsy [1]. Most often the dentist sees only symptomatic eruption cysts and the majority resolve unnoticed. EC most commonly are found in the mandibular molar region [5]. The color of these lesions can range from normal to blue-black or brown, depending on the amount of blood in the cystic fluid [6]. The blood is seen secondary to trauma. If trauma is intense, these blood-filled lesions sometimes are referred to as eruption hematomas [7].

Most EC occur in the age group of 6-9 years, with the eruption of permanent first molars and incisors [1]. In the present case study the eruption cyst was found associated with permanent premolar. Clinically, it appears as a dome shaped raised swelling in the mucosa of the alveolar ridge, which is soft to touch and the color ranges from transparent, bluish, purple to blue-black [1]. Eruption cyst occurs most frequently on the right side than left and among males than in females [1].

Fig. 1: Bluish brown dome shaped raised swelling in the region of maxillary left first premolar of 1x1cm size

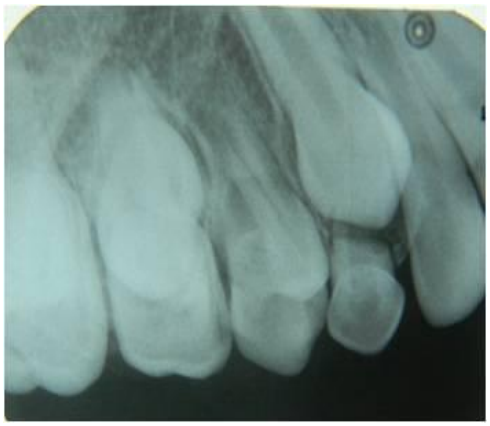

Fig. 2: Intra oral periapical radiograph showed a pericoronal shadow of soft tissue covering the erupting tooth

Fig. 3: Surgical exposure was carried out to expose the erupting tooth

In the present case it occurred on the left side. Most often, eruption cysts are found to be asymptomatic but there can be pain on palpation due to secondary factors such as trauma or infection [8]. Pain was reported as a secondary factor. Differential diagnosis should be considered before delivering any treatment and varies from granuloma, amalgam tattoo and eruption hematoma [8]. The eruption hematoma occurs because of bleeding from the gum tissue during eruption and the accumulation of blood is external to the epithelium of the enamel [9]. While in the eruption cyst, it is the cystic fluid that mixes

with the blood. The exact difference between the two is still unknown. The eruption cyst glows under trans illumination but the hematoma does not glow [8]. Other authors reported that if bleeding occurs within the cyst, due to trauma or local infection, the eruption cyst becomes bluish in color and is then known as an eruption hematoma, or a blue stain, which may be the first sign of a follicular cyst [1]. The eruption cysts do not require treatment and majority of them disappear on their own [10]. Surgical intervention is required when they hurt, bleed, are infected, or create esthetic problems [1].

If the cyst does not rupture spontaneously or the lesion becomes infected, the roof of the cyst may be opened surgically [4]. Interventional treatment may not be necessary because the cyst ruptures spontaneously, thus permitting the tooth to erupt [9]. If this does not occur, simple excision of the roof of the cyst generally permits speedy eruption of the tooth [9]. Simple incision or partial excision of the overlying tissue to expose the crown and drain the fluid is indicated when the underlying tooth is not erupting or the cyst is enlarging.

Use of Er, Cr-YSGG laser for treatment of eruption cysts is suggested by Boj *et al.*, [10,11,12]. It has certain advantages over conventional exposure with scalpel. They can be listed as non-requirement of anesthesia, no excessive operative bleeding, does not produce heat or friction and patient will be comfortable. It is bactericidal and has coagulative effects, tissue healing is better and faster, and it is not associated with postoperative pain [11,12]

CONCLUSION:

EC is clinically asymptomatic but when it gets secondary infected causing pain. Patient or the parents usually bothered about the appearance. Since the tooth erupts through the lesion, no treatment may be necessary.

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